

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 August 2003 (21.08.2003)

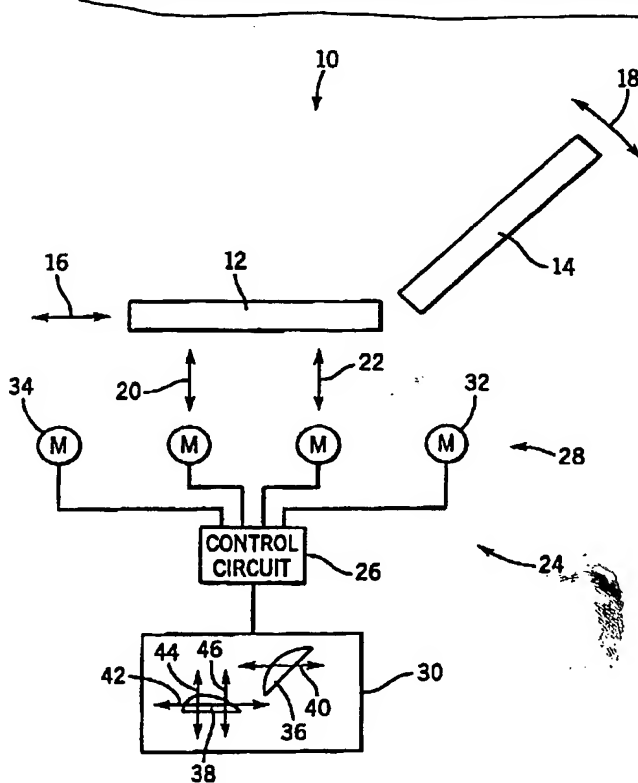
PCT

(10) International Publication Number
WO 03/068552 A1

- (51) International Patent Classification⁷: B60N 2/02 (72) Inventors; and
(75) Inventors/Applicants (for US only): HANCOCK, Robert, L. [US/US]; 3321 Alton Court, Ann Arbor, MI 48105 (US). CUSSEN, Terrence, M. [US/US]; 3461 Burbank Drive, Ann Arbor, MI 48105 (US). MCELROY, Joseph, W. [US/US]; 1235 Morningside, Ann Arbor, MI 48105 (US). KOESTER, Daniel, J. [US/US]; 2408 Antietam Drive, Ann Arbor, MI 48105 (US). WEVERS, Bruno [FR/US]; 6081 Eastmoor, Bloomfield Hills, MI 48301 (US).
- (21) International Application Number: PCT/US03/04085
- (22) International Filing Date: 12 February 2003 (12.02.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/356,277 12 February 2002 (12.02.2002) US
- (74) Agent: NIELSON, SCOTT, C.; FOLEY & LARDNER, 777 E. Wisconsin Avenue, 33rd Floor, Milwaukee, WI 53202-5367 (US).
- (71) Applicant (for all designated States except US): JOHN-SON CONTROLS TECHNOLOGY COMPANY [US/US]; 49200 Halyard Drive, Plymouth, MI 48170 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

[Continued on next page]

(54) Title: VEHICLE SEAT HAVING AN ELECTRONIC CONTROL SYSTEM



(57) Abstract: An electronic control system (24) for a vehicle seat is provided that includes a seat base (12), a seat back (14), an operator input device (30) and a control circuit (26). The seat base has a seat base motor (34) configured to move a seat base forward and backward. The seat back has a seat back motor (32) configured to adjust an angle of inclination of the seat back. The operator input (30) device is configured to received operator commands for movement of the vehicle seat. The control circuit is configured to receive the operator commands and to control the seat base motor and the seat back motor. The control circuit is also configured to move the seat base and the seat back at a ratio of approximately 1 degree of inclination to between approximately 1 mm to approximately 4 mm of forward or backward movement of the seat base.

WO 03/068552 A1

14 JUL 2004

WO 03/068552 A1



LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.